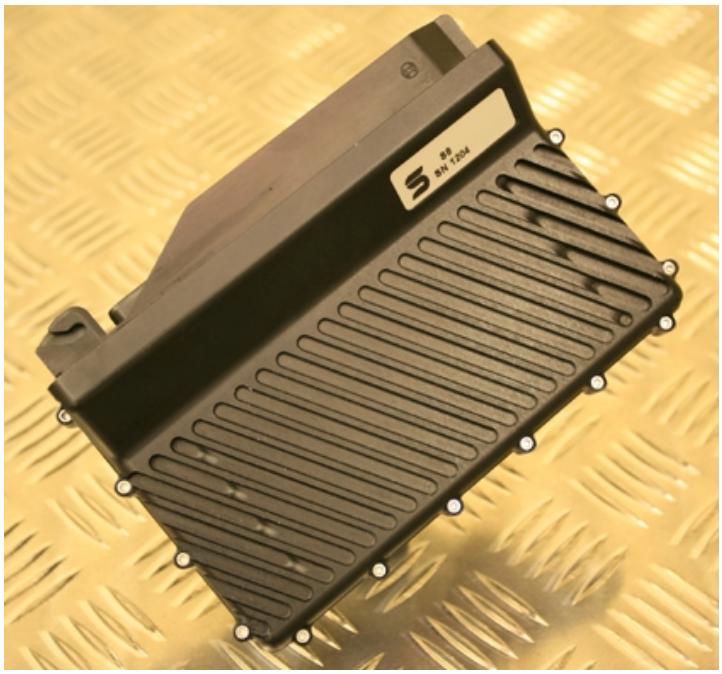
AIM Infotech

Syvecs
S4C S6PNP S6GP S8C ECU

Release 1.00



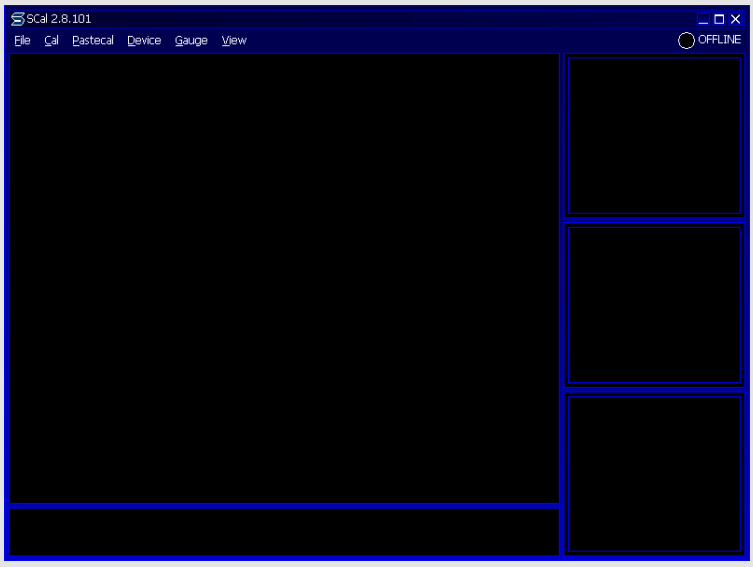
This tutorial explains how to connect Syvecs ECU to AIM devices. Supported Syvecs models are:

- S4C;
- S6PNP;
- S6GP;
- S8C.

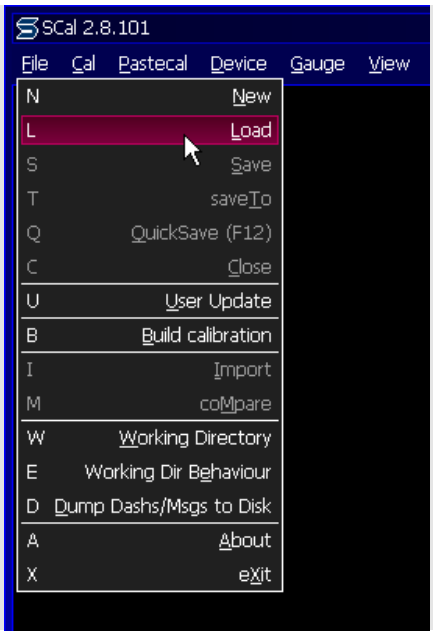
1 Software setup

Sycvecs ECU comes with Solaris software suite you will also use to make it communicating with AIM devices. After software installation 6 icons appears on the PC desktop. Double click on “SCal” icon as shown here below.

Solaris “SCal” main page is shown here below.

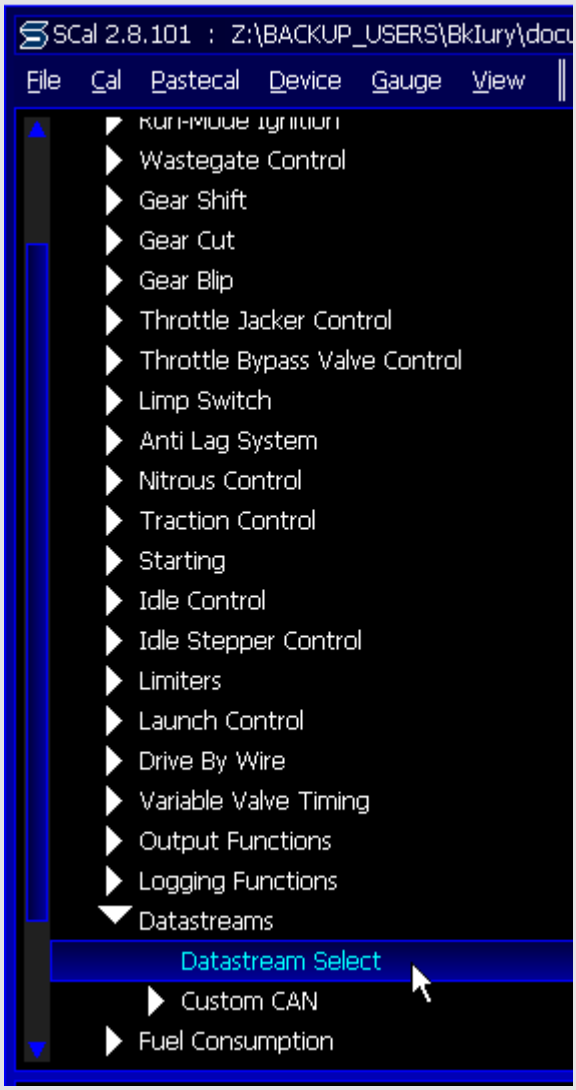


Follow this path: “File –> Load”.



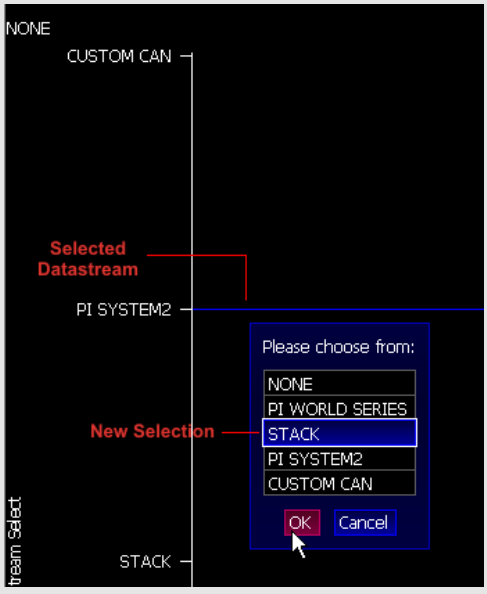
Browse the PC to find the folder where you stored the calibration file and select it. This panel appears. Press “OK”.

A list of possible options appears: scroll it up to “Datastreams” and press “enter”; select “Datastream Select” as shown below and press enter.



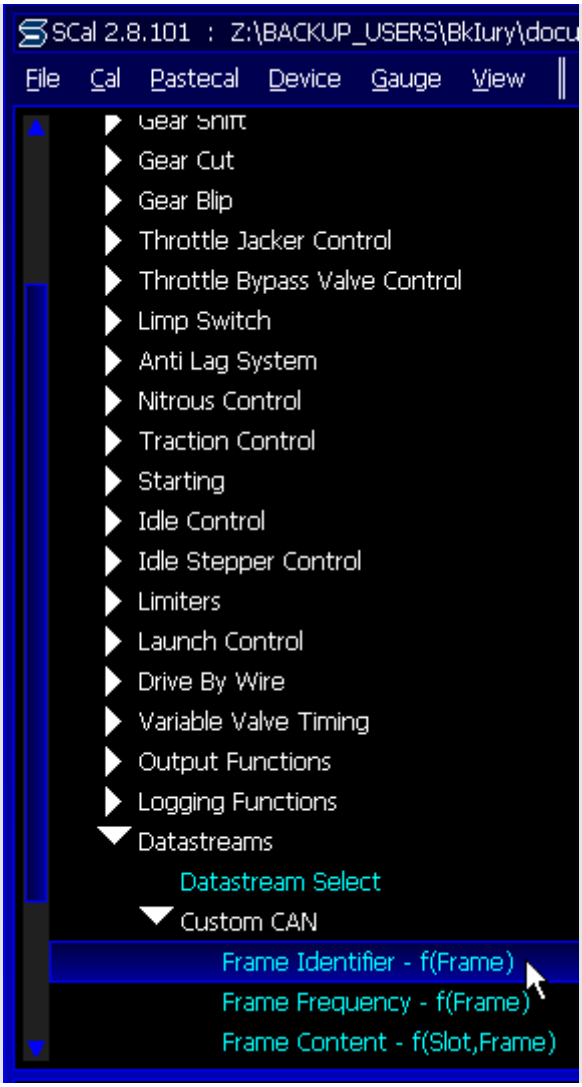
Check which datastream is selected. If Stack is – as here below – you can come back to the previous page through the path “File –> Load”.

If it is not – as here below – press “enter”; a panel appears, scroll the options, select “Stack” and press “OK”.

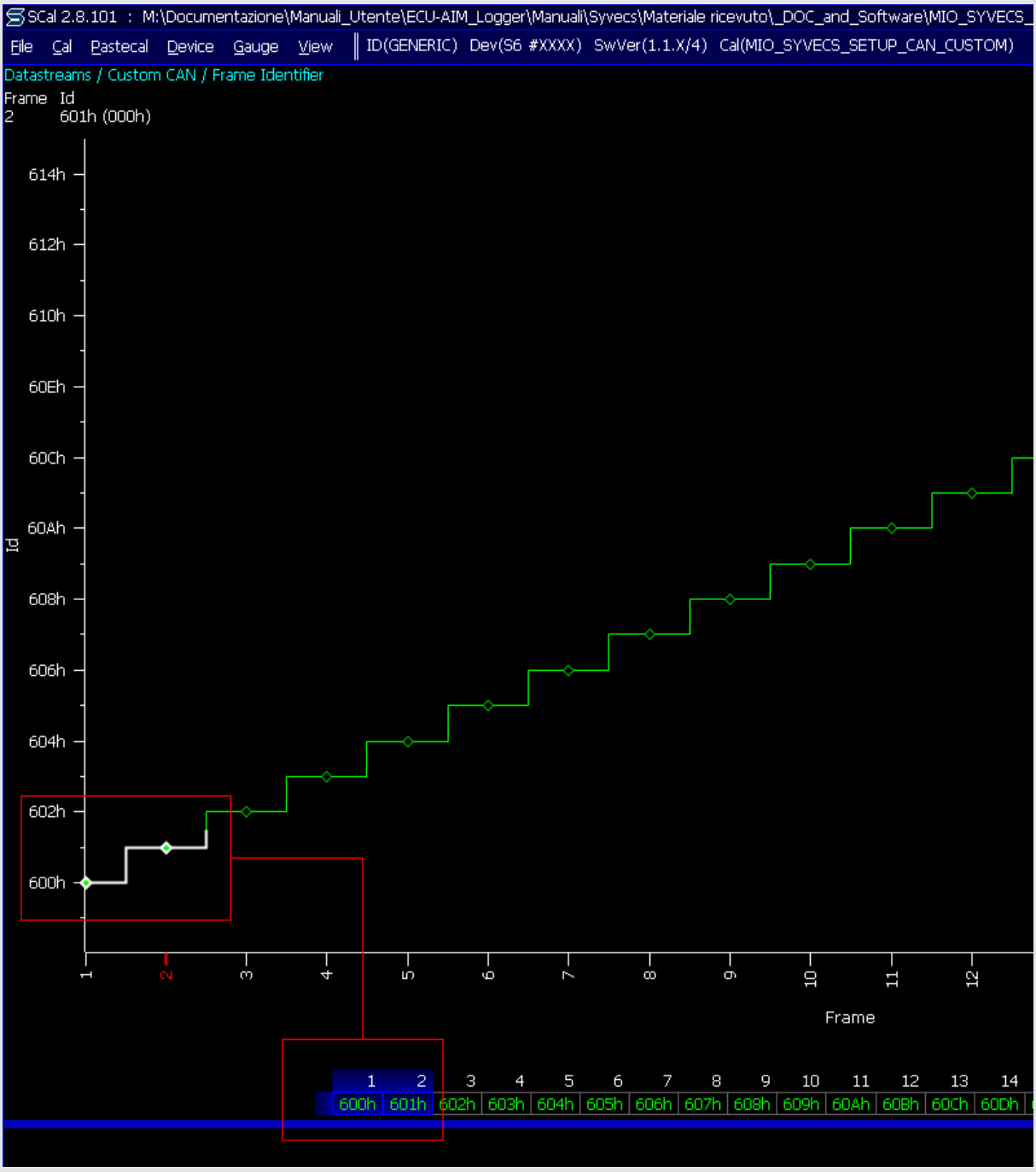


Come back to the main page following the path “File –> Load”.

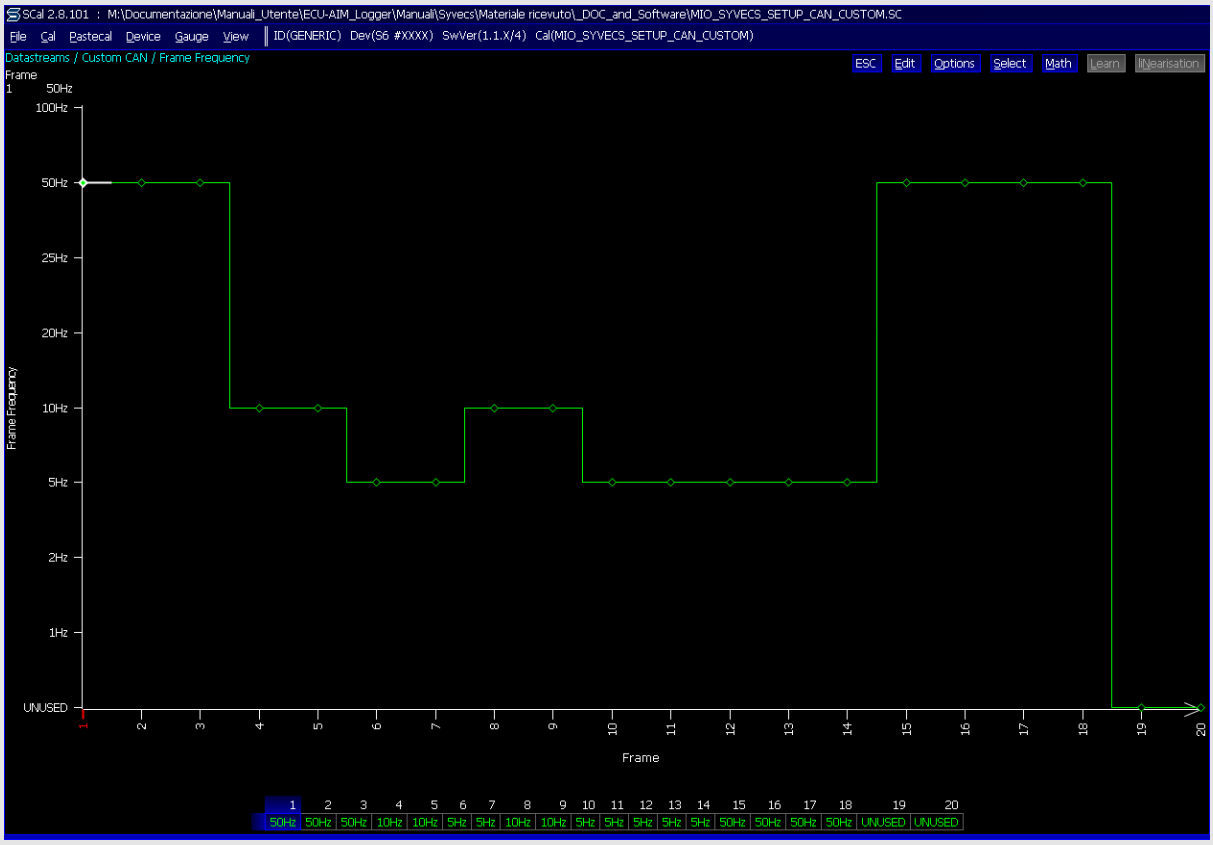
Scroll the list following this path: “Datastreams –> Custom CAN –> Frame Identifier”.



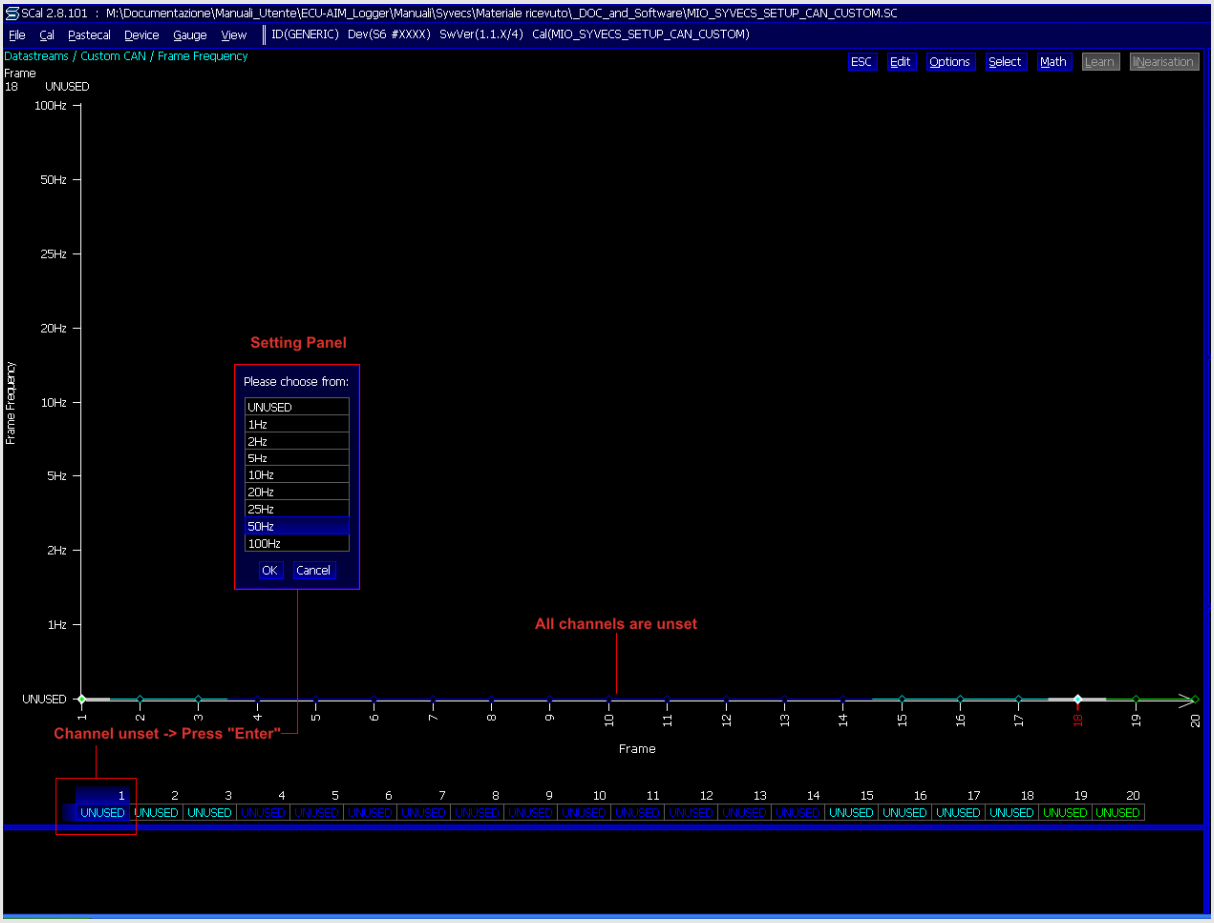
“Frame Identifier” page appears. ID Adress 0x600 and 0x601 should already be selected as here below. If they aren’t, you have to manually fill in all ID Addresses. Please refer to your ECU user manual to know what to do.



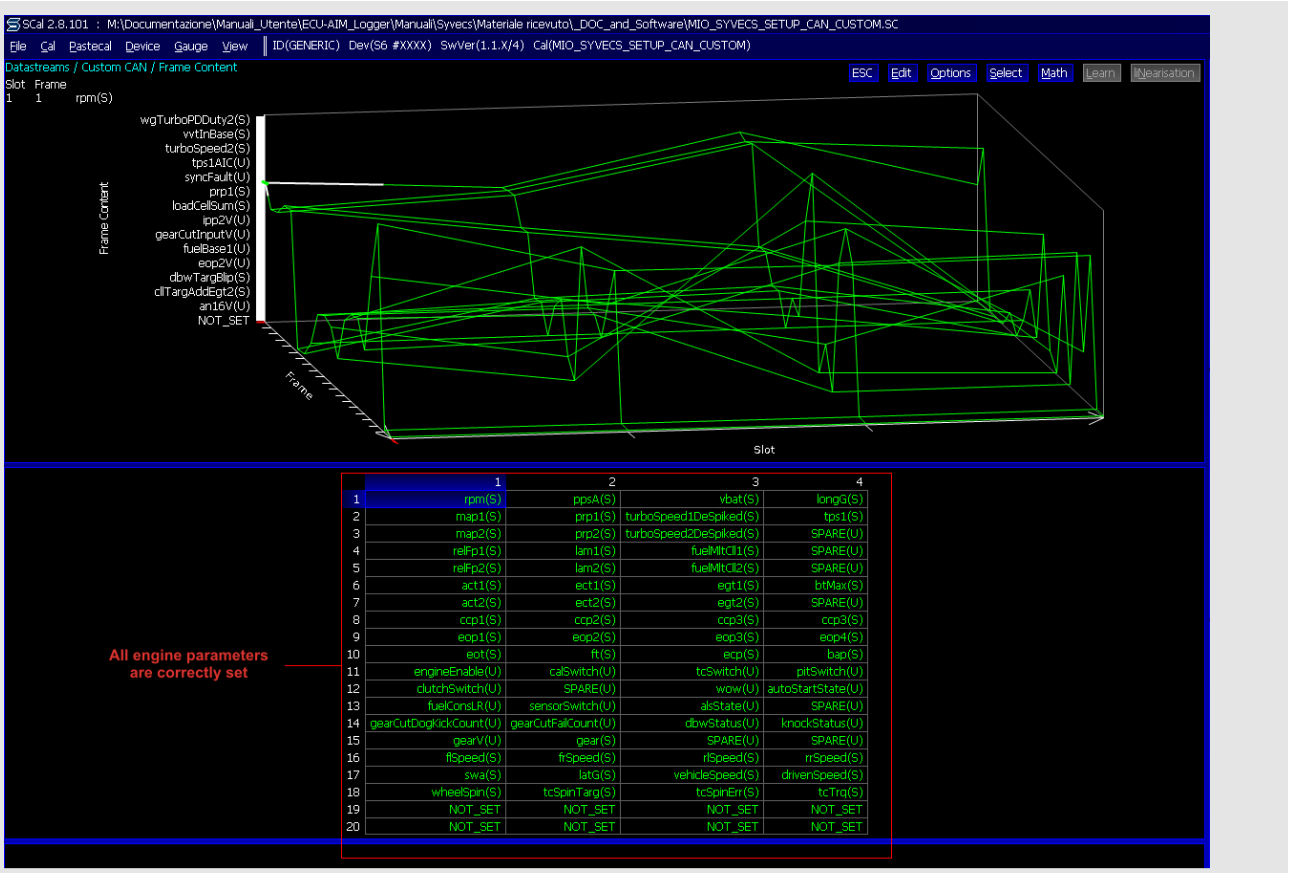
Come back to the main page through the path “File –> Load”. Scroll the list following this path: “Datastreams –> Custom CAN –> Frame Frequency”. “Frame frequency” page appears. Here below it is already set.



If the page appears with all frequencies unset (labelled as “UNUSED”) – as below, select the first channel, press “enter” and when the setting panel appears select the desired frequency and press “OK”. Please refer to your ECU user manual to know how to set each channel frequency.

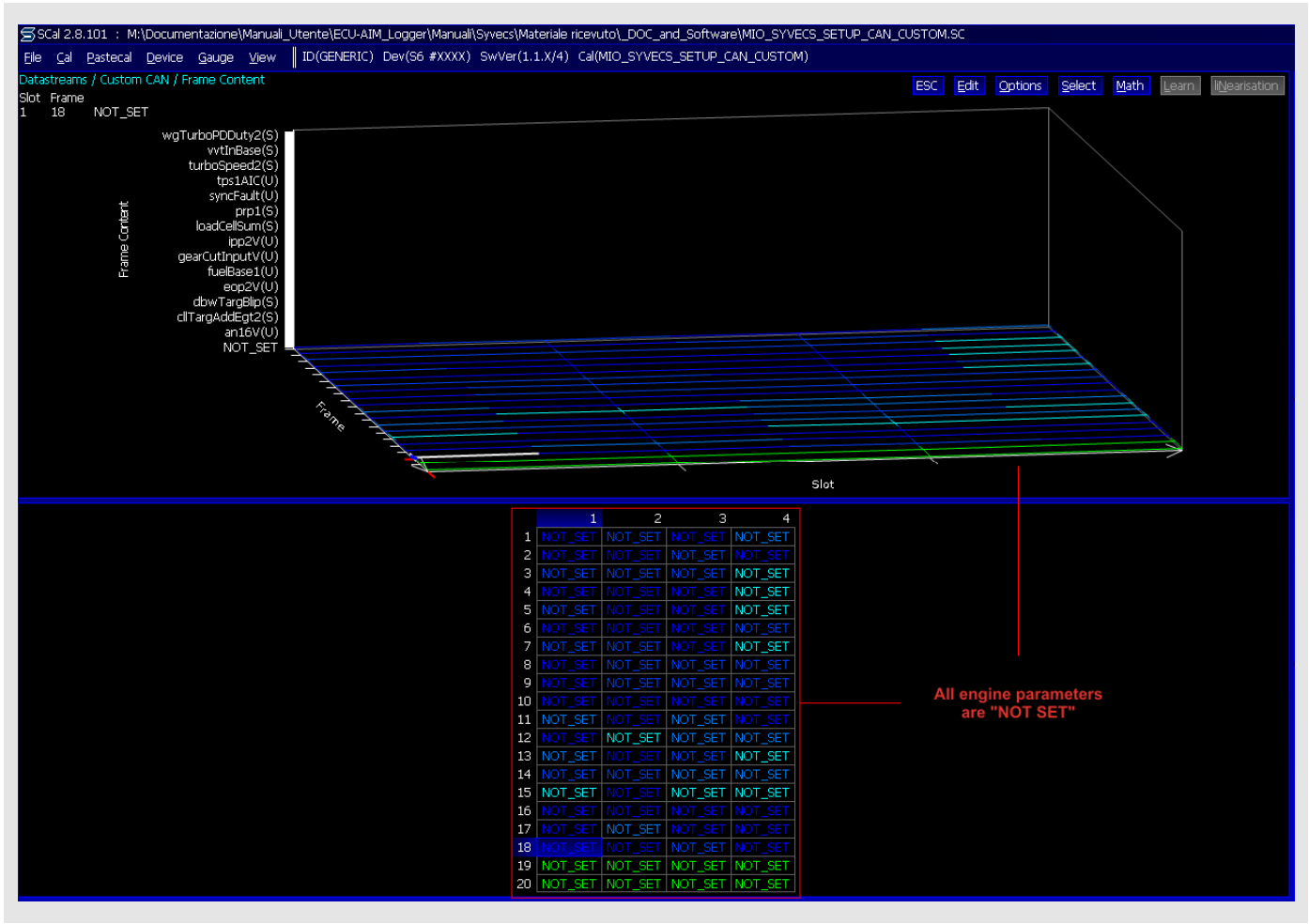


Come back to the main page through the path “File –> Load”. Scroll the list following this path: “Datastreams –> Custom CAN –> Frame Content”. “Frame Content” page appears. Here below it is already set.



	1	2	3	4
1	rpm(S)	ppsA(S)	vbat(S)	longG(S)
2	map1(S)	prp1(S)	turboSpeed1DeSpiked(S)	tps1(S)
3	map2(S)	prp2(S)	turboSpeed2DeSpiked(S)	SPARE(U)
4	relFp1(S)	lam1(S)	fuelMltCll1(S)	SPARE(U)
5	relFp2(S)	lam2(S)	fuelMltCll2(S)	SPARE(U)
6	act1(S)	ect1(S)	egt1(S)	btMax(S)
7	act2(S)	ect2(S)	egt2(S)	SPARE(U)
8	ccp1(S)	ccp2(S)	ccp3(S)	ccp3(S)
9	eop1(S)	eop2(S)	eop3(S)	eop4(S)
10	eot(S)	ft(S)	ecp(S)	bap(S)
11	engineEnable(U)	calSwitch(U)	tcSwitch(U)	pitSwitch(U)
12	clutchSwitch(U)	SPARE(U)	wow(U)	autoStartState(U)
13	fuelConsLR(U)	sensorSwitch(U)	alsState(U)	SPARE(U)
14	gearCutDogKickCount(U)	gearCutFailCount(U)	dbwStatus(U)	knockStatus(U)
15	gearV(U)	gear(S)	SPARE(U)	SPARE(U)
16	flSpeed(S)	frSpeed(S)	rlSpeed(S)	rrSpeed(S)
17	swa(S)	latG(S)	vehicleSpeed(S)	drivenSpeed(S)
18	wheelSpin(S)	tcSpinTarg(S)	tcSpinErr(S)	tcTrq(S)
19	NOT_SET	NOT_SET	NOT_SET	NOT_SET
20	NOT_SET	NOT_SET	NOT_SET	NOT_SET

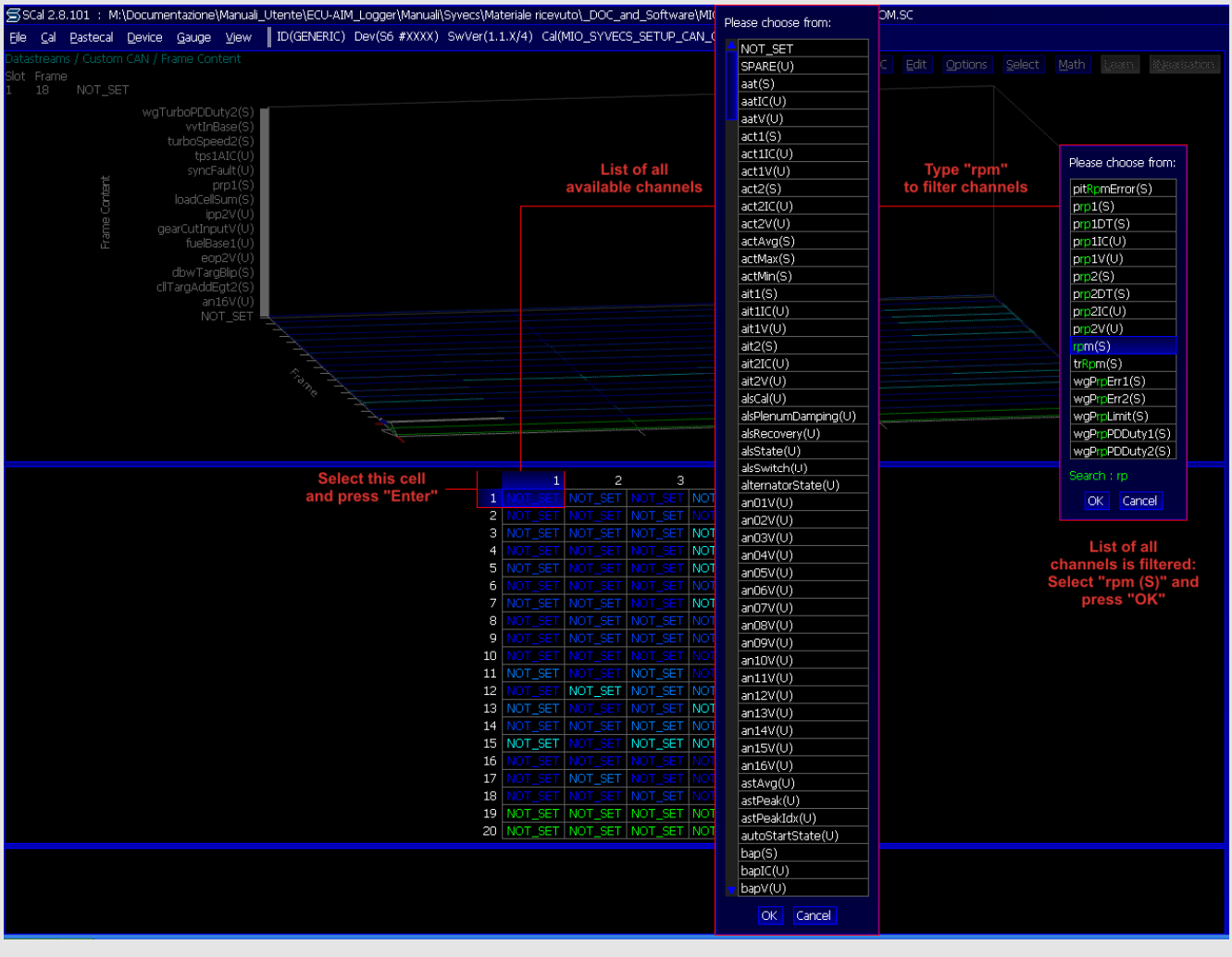
If the page appears with all frequencies NOT SET – as below – you need to set each engine parameter.



To set engine parameters:

- select the first cell and press “enter”;
- the panel showing all available channels appears;
- you can filter channels typing the name of the desired channel or part of it. The first cell is for “RPM” so type “rpm” and the panel resizes reducing the number of available channels. Select the desired RPM channel and press OK. Repeat this operation for all channels.

Here below are a graph illustrating this operation (using “RPM” channel as example).

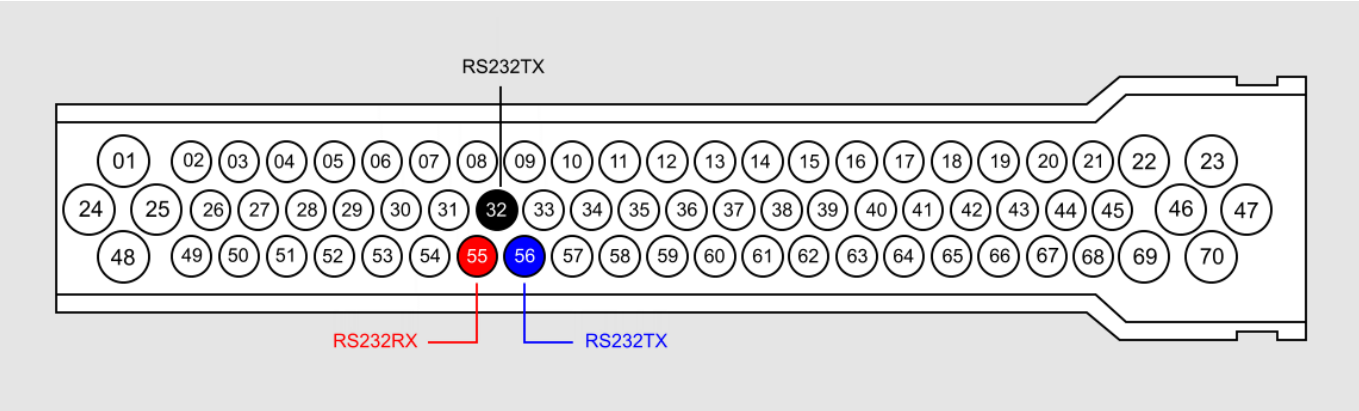


Here follows the table with all channels setting.

	1	2	3	4
1	rpm_S	ppsA_S	vbat_S	longG_S
2	map1_S	prp1_S	turboSpeed1DeSpiked_S	tps1_S
3	map2_S	prp2_S	turboSpeed2DeSpiked_S	SPARE_U
4	relFp1_S	lam1_S	fuelMltCll1_S	SPARE_U
5	relFp2_S	lam2_S	fuelMltCll2_S	SPARE_U
6	act1_S	ect1_S	egt1_S	btMax_S
7	act2_S	ect2_S	egt2_S	SPARE_U
8	ccp1_S	ccp2_S	ccp3_S	ccp3_S
9	eop1_S	eop2_S	eop3_S	eop4_S
10	eot_S	ft_S	ecp_S	bap_S
11	engineEnable_U	calSwitch_U	tcSwitch_U	pitSwitch_U
12	clutchSwitch_U	SPARE_U	wow_U	autoStartState_U
13	fuelConsLR_U	sensorSwitch_U	alsState_U	SPARE_U
14	gearCutDogKickCount_U	gearCutFailCount_U	dbwStatus_U	knockStatus_U
15	gearV_U	gear_S	SPARE_U	SPARE_U
16	flSpeed_S	frSpeed_S	rlSpeed_S	rrSpeed_S
17	swa_S	latG_S	vehicleSpeed_S	drivenSpeed_S
18	wheelSpin_S	tcSpinTarg_S	tcSpinErr_S	tcTrq_S
19	NOT_SET	NOT_SET	NOT_SET	NOT_SET
20				

2
Serial communication setup

Syvecs ECUs communicates using the serial protocol. All supported ECU – S4C, S6PNP, S6GP, S8C – are equipped with a 70 pins connector. Here below are shown the 70 pins connector as well as the connection table.



70 pins Connector pin	Pin function	AIM cable label
56	RS232TX	RS232RX
55	RS232RX	RS232TX
32	Communication GND	GND

3
AIM Logger configuration

Once the ECU connected to the logger, this last one is to be configured as connected to the ECU.

Run Race Studio 2 software and follow this path:

- Device Configuration –> Select the device you are using;
- select the configuration or press “New” to create a new one;
- select ECU manufacturer “Syvecs” and ECU Model “Stack_Datastream”;
- transmit the configuration to the device pressing “Transmit”.

4
Available channels

Channels received by AIM devices connected to Syvecs S4C, S6PNP, S6GP or S8C are:

ID	CHANNEL NAME	FUNCTION
ECU_1	ECU_RPM	RPM
ECU_2	ECU_SPEED	Speed
ECU_3	ECU_OIL_PRESS	Oil pressure
ECU_4	ECU_OIL_TEMP	Oil temperature
ECU_5	ECU_WATER_TEMP	Water temperature
ECU_6	ECU_FUEL_PRESS	Fuel pressure
ECU_7	ECU_BATT_VOLT	Battery supply
ECU_8	ECU_THRT_ANGLE	Throttle angle
ECU_9	ECU_MAP	Manifold Air pressure
ECU_10	ECU_AIR_CHARGE	Air charge
ECU_11	ECU_EXH_TEMP	Exhausted gas temperature
ECU_12	ECU_LAMBDA	Lambda value
ECU_13	ECU_FUEL_TEMP	Fuel temperature
ECU_14	ECU_GEAR	Engaged gear
ECU_15	ECU_ERRORS	ECU error
ECU_16	ECU_COUNTER	ECU counter
ECU_17	ECU_FUEL_USED	Used fuel